Phytoplankton data from western Baffin Bay and adjacent waters

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November 1987

Canadian Data Report of Fisheries and Aquatic Sciences No. 674

Fisheries and Oceans Pêches et Océans

Canada

88-02921/

Canadian Data Report of Fisheries and Aquatic Sciences

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Cat. No. Fs97-13/0674 ISSN 0706-6465

Correct citation for this publication:

Hsiao, Stephen I. C. and Nadia Pinkewycz 1987. Phytoplankton data from western Baffin Bay and adjacent waters. Can. Data Rep. Fish. Aquat. Sci. 674: iv + 55 p.

CONTENTS

Abstract/Résumé		iv
Introduction		1
Materials and Methods		1
Acknowledgements		1
References		1
Table 1	Station locations	3
Table 2	Phytoplankton taxa found in western Baffin Bay	4
Table 3	Phytoplankton taxa from eastern Jones Sound	7
Table 4	Phytoplankton taxa from eastern Lancaster Sound	9
Tables 5-20	Species composition, abundance and vertical distribution of phytoplankton in western Baffin Bay	11
Tables 21-23	Species composition, abundance and vertical distribution of phytoplankton in eastern Jones Sound	42
Tables 24-27	Species composition, abundance and vertical distribution of phytoplankton in eastern Lancaster Sound	48

ABSTRACT

Hsiao, Stephen I.C. and Nadia Pinkewycz. 1987. Phytoplankton data from western Baffin Bay and adjacent waters. Can. Data Rep. Fish. Aquat. Sci. 674: iv + 55 p.

Phytoplankton samples were collected from 23 stations at depths of 1, 5, 20, 50, 100 and 200 m in eastern Jones Sound, eastern Lancaster Sound and western Baffin Bay during the summer and fall of 1979. These samples were quantitatively analyzed for species composition and abundance. In terms of numbers of species and cells, the diatoms comprised the largest group; green algae, chrysophytes, euglenoids and dinoflagellates occurred in lower numbers.

Key words: phytoplankton, species composition, abundance, vertical distribution.

RESUME

Hsiao, Stephen I. C. and Nadia Pinkewycz 1987. Phytoplankton data from western Baffin Bay and adjacent waters. Can. Data Rep. Fish. Aquat. Sci. 674: iv + 55 p.

Des échantillons de phytoplancton ont été collectionnés à des profondeurs de 1, 5, 20, 50, 100 et 200 m à 23 stations dans l'est du détroit de Jones, l'est du détroit de Lancaster et l'ouest de la baie de Baffin pendant l'été et l'automne 1979. Ces échantillons ont été analysés quantitativement selon la composition et l'abondance d'espèces. En terme d'espèces et cellules, les diatomées formaient le plus grand groupe; algues vertes, chrysophytes, euglenoides et dinoflagellées se trouvaient en plus petit nombre.

INTRODUCTION

The data presented in this report are based on samples obtained through the Eastern Arctic Marine Environmental Studies Program (EAMES) which was carried out in response to proposed oil and gas exploration in the Canadian Eastern Arctic. Phytoplankton are the primary source of energy for all marine food chains. They are often used as indicators of environmental changes resulting from resource development activities. This study examines the species composition, abundance and distribution of phytoplankton as they reflect baseline regional or environmental conditions prior to full scale resource development.

MATERIALS AND METHODS

Phytoplankton collections were made in eastern Jones Sound, eastern Lancaster Sound and western Baffin Bay (Fig. 1) by oceanographers of the EAMES project during the summer and fall of 1979. Samples were collected with a 5.0-L Niskin sampling bottle from depths of 1, 5, 20, 50, 100 and 200 m. One hundred and twenty-five (125) mL of phytoplankton samples were preserved with 2.5 mL of 40% formaldehyde solution, neutralized with calcium carbonate in Boston round polyethylene bottles. The preserved phytoplankton are quantitatively and qualitatively analyzed for species composition and abundance. The species were identified with the aid of a Leitz phase-contrast compound microscope. The cells were enumerated by the method of Hsiao (1979) with the aid of a Leitz inverted microscope.

ACKNOWLEDGEMENTS

We thank participants in the EAMES Project, especially T. Cartier, R. Harland and B. Petolas for collecting the phytoplankton samples. Thanks are also extended to Michelle Danis for typing the manuscript.

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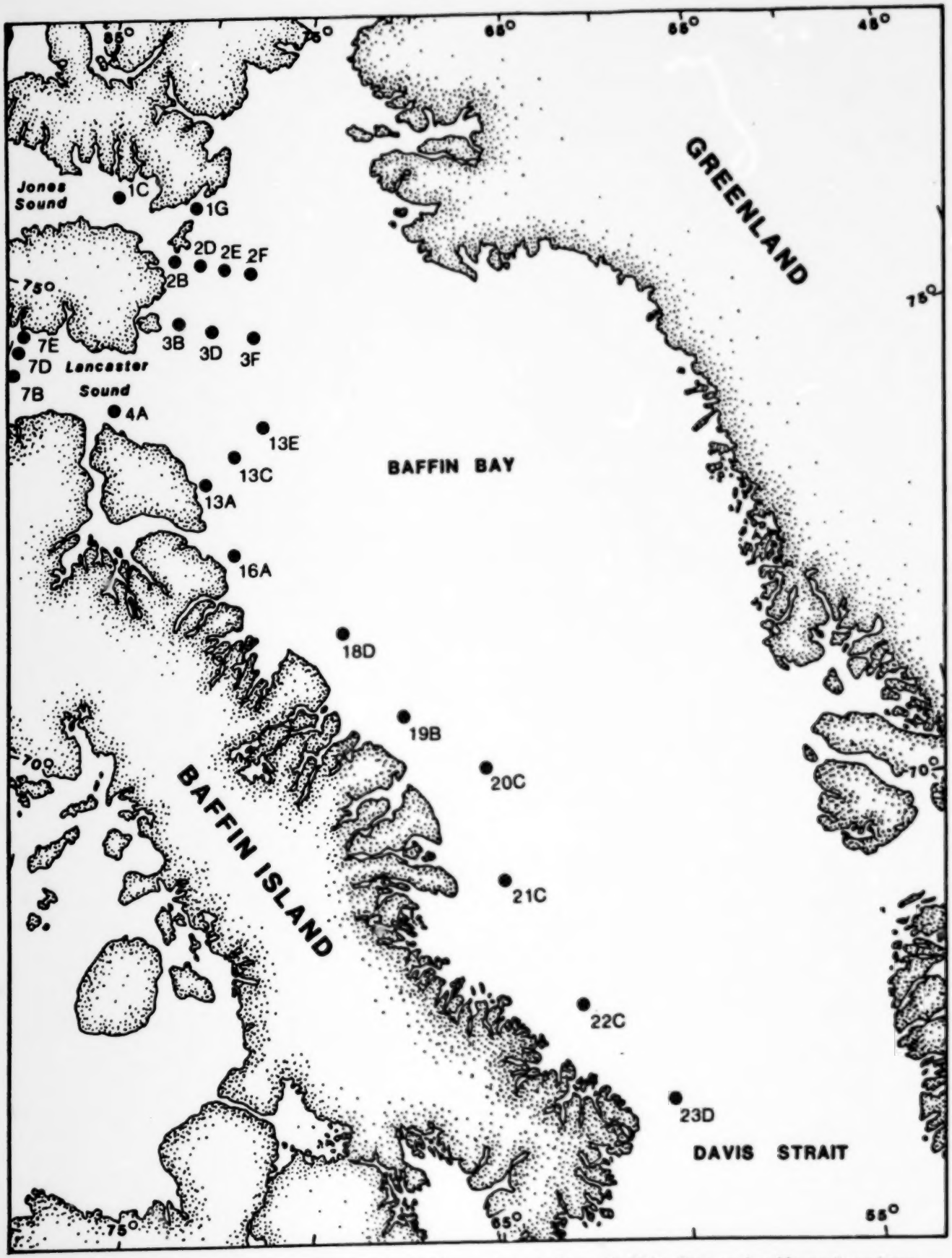

Fig. 1 Map showing the locations of stations in western Baffin Bay and adjacent waters.

Table 1. Station Locations

Station	North Latitude	West Longitude
1C	76°08.1'	82°36.5'
1G	76°14'	79°16'
2B	75°37.8'	79°21.5'
2D	75°40'	78°27'
2E	75°44.2'	77°11'
2F	75°51.5'	75°18.5'
3B	74°58.1'	78°46'
3D	74°58.1'	77°23.5'
3F	74°58.1'	75°11'
4A	73°48.5'	80°11'
7B	73°59'	84°39.5'
7D	74°18.1'	84°39.5'
7E	74°29'	84°39.5'
13A	73°21.8'	76°29'
13C	73°39.7'	75°27'
13E	73°58.8'	74°21.5'
16A	72°37.4'	74°55.5'
18D	71°47.9'	70°43'
19B	71°6'	68°20.5'
20C	70°20.2'	65°49'
21C	69°11.4'	65°4'
22C	67°58.5'	62°49.5'
23D	66°49.4'	60°19.5'

Table 2. Phytoplankton taxa found in western Baffin Bay

Bacillariophyta
  Centrales
    Biddulphia S.F. Gray
    B. aurita (Lyngbye) Brébisson et Godey
    B. striata Karsten
    Chaetoceros affinis Lauder
    C. borealis J.W. Bailey
    C. decipiens Cleve
    C. furcellatus J.W. Bailey
    C. lauderi Ralfs
    C. septentrionalis Oestrup
    C. wighami Brightwell
    Ditylum L.W. Bailey
    Eucampia Ehrenberg
    E. groenlandica Cleve
    Thalassiosira decipiens (Grunow) E. Joergensen
    T. gravida Cleve
    Triceratium Ehrenberg
  Pennales
    Achnanthes taeniata Grunow
    Amphiprora Ehrenberg
    A. concilians Cleve
    Amphora inelegans Cleve et Grove
    Cocconeis scutellum Ehrenberg
    Cylindrotheca closterium (Ehrenberg) Reimann et Lewin
    Diploneis Ehrenberg
    Flagilaria Lyngbye
    F. pinnata Ehrenberg
    Gomphonema Agardh
    G. augur Ehrenberg
    Gyrosigma fasciola (Ehrenberg) Griffith et Henfrey
    Navicula Bory
    N. crassirostris Grunow
    N. debilissima Grunow
    N. directa (Wm. Smith) Ralfs
    N. distans (Wm. Smith) Ralfs
    N. granii (E. Joergensen) Gran
    N. transitans var. derasa (Grunow) Cleve
    N. vanhoeffenii Gran
    Nitzschia acicularis (Kutzing) Wm. Smith
    N. cylindrus (Grunow) Hasle
    N. delicatissima Cleve
    N. frigida Grunow
    N. grunowii Hasle
    N. linearis (Agardh) Wm. Smith
    N. seriata Cleve

Table 2. (cont'd)

N. sigma (Kutzing) Wm. Smith
Pinnularia quadratarea var. densestriata Cleve
Pleurosigma Wm. Smith
P. longum Cleve
Rhabdonema Kutzing
Synedra Ehrenberg

Chlorophyta
Ankistrodesmus Corda
A. antarcticus Kol et Flint
A. falcatus (Corda) Ralfs
Carteria vectensis Conrad et Kufferath
Chlamydomonas ballenyana Kol et Flint
C. pulsatilla Wohlenweber
Pyramimonas octociliata Carter

Chrysophyta
Calyptrosphaera oblonga Lohmann
Dinobryon Ehrenberg
D. cylindricum Imhof
Distephanus Haeckel
Mallomonas Perty
M. acaroides Perty
M. caudata Iwanoff
Phaeocystis pouchetii (Hariot) Lagerheim
Salpingoeca natans Grontved

Euglenophyta
Euglena acus Ehrenberg
E. proxima Dangeard
E. schmitzii

Pyrrophyta
Dinophysis arctica Mereschkowsky
Glenodinium Ehrenberg
Goniaulax Diesing
G. cyst
G. catenata Kofoid
G. parva Ramsfjell
G. scrippsae Kofoid
Gymnodinium Stein
G. lohmanni Paulsen
Gyrodinium spirale (Bergh) Kofoid et Swezy
Oxytoxum Stein
Peridinium Ehrenberg
P. cerasus Paulsen

Table 2. (cont'd)

P. charcotii Balech
P. minusculum Pavillard
P. pellucidum (Bergh) Schutt
Prorocentrum Ehrenberg
P. rampii Sournia
Protoperidinium diabolum (Cleve) Balech

Table 3. Phytoplankton taxa from eastern Jones Sound

Bacillariophyta
  Centrales
    Chaetoceros affinis Lauder
    C. borealis J.W. Bailey
    C. decipiens Cleve
    C. furcellatus J.W. Bailey
    C. septentrionalis Oestrup
    C. wighami Brightwell
    Ditylum L.W. Bailey
    Eucampia Ehrenberg
    Thalassiosira Cleve
    T. decipiens (Grunow) E. Joergensen
    T. gravida Cleve
  Pennales
    Achnanthes taeniata Grunow
    Cylindrotheca closterium (Ehrenberg) Reimann et Lewin
    Fragilaria Lyngbye
    F. pinnata Ehrenberg
    Gomphonema Agardh
    G. augur Ehrenberg
    Gyrosigma fasciola (Ehrenberg) Griffith et Henfrey
    Navicula Bory
    N. crassirostris Grunow
    N. debilissima Grunow
    N. distans (Wm. Smith) Ralfs
    N. granii (E. Joergensen) Gran
    Nitzschia acicularis (Kutzing) Wm. Smith
    N. cylindrus (Grunow) Hasle
    N. delicatissima Cleve
    N. grunowii Hasle
    N. linearis (Agardh) Wm. Smith
    N. seriata Cleve
    N. sigma (Kutzing) Wm. Smith
    Pleurosigma longum Cleve

Chlorophyta
    Ankistrodesmus antarcticus Kol et Flint
    A. falcatus (Corda) Ralfs
    Carteria vectensis Conrad et Kufferath
    Chlamydomonas ballenyana Kol et Flint
    C. pulsatilla Wohlenweber
    Pyramimonas octociliata Carter

Chrysophyta
    Calyptrosphaera oblonga Lohmann
    Dinobryon Ehrenberg
    Mallomonas Perty
    Phaeocystis pouchetii (Hariot) Lagerheim

Table 3. (cont'd)

Euglenophyta
- *Euglena proxima* Dangeard
- *E. schmitzii* Gojdics

Pyrrophyta
- *Dinophysis arctica* Mereschkowsky
- *Goniaulax* Diesing
- *G. catenata* Kofoid
- *G.* cyst
- *G. scrippsae* Kofoid
- *Gymnodinium* Stein
- *G. lohmanni*
- *Gyrodinium spirale* (Bergh) Kofoid et Swezy
- *Oxytoxum* Stein
- *Peridinium* Ehrenberg
- *P. charcotii* Balech
- *P. minusculum* Pavillard
- *P. pellucidum* (Bergh) Schutt
- *Prorocentrum* Ehrenberg
- *Protoperidinium diabolum* (Cleve) Balech

Table 4. Phytoplankton taxa from eastern Lancaster Sound

Bacillariophyta
- Centrales
  - *Biddulphia striata* Karsten
  - *Chaetoceros affinis* Lauder
  - *C. borealis* J.W. Bailey
  - *C. decipiens* Cleve
  - *C. furcellatus* J.W. Bailey
  - *C. septentrionalis* Oestrup
  - *C. wighami* Brightwell
  - *Eucampia* Ehrenberg
  - *E. groenlandica* Cleve
  - *Thalassiosira* Cleve
  - *T. decipiens* (Grunow) E. Joergensen
- Pennales
  - *Achnanthes taeniata* Grunow
  - *Amphiprora concilians* Cleve
  - *Amphora inelegans* Cleve et Grove
  - *Cylindrotheca closterium* (Ehrenberg) Reimann et Lewin
  - *Eunotia* Ehrenberg
  - *Gyrosigma fasciola* (Ehrenberg) Griffith et Henfrey
  - *Navicula* Bory
  - *N. crassirostris* Grunow
  - *N. granii* (E. Joergensen) Gran
  - *N. transitans* var. *derasa* (Grunow) Cleve
  - *Nitzschia acicularis* (Kutzing) Wm. Smith
  - *N. cylindrus* (Grunow) Hasle
  - *N. delicatissima* Cleve
  - *N. grunowii* Hasle
  - *N. linearis* (Agardh) Wm. Smith
  - *N. seriata* Cleve
  - *N. sigma* (Kutzing) Wm. Smith
  - *Pleurosigma* Wm. Smith

Chlorophyta
- *Ankistrodesmus antarcticus* Kol et Flint
- *Carteria vectensis* Conrad et Kufferath
- *Chlamydomonas ballenyana* Kol et Flint
- *C. pulsatilla* Wohlenweber
- *Pyramimonas octociliata* Carter

Chrysophyta
- *Dinobryon* Ehrenberg
- *D. cylindricum* Imhof
- *Distephanus* Haeckel
- *Mallomonas acaroides* Perty
- *M. caudata* Iwanoff
- *Phaeocystis pouchetii* (Hariot) Lagerheim

Table 4. (cont'd)

Euglenophyta
- *Euglena* Ehrenberg
- *E. proxima* Dangeard
- *E. schmitzii* Gojdics

Pyrrophyta
- *Dinophysis* Ehrenberg
- *D. arctica* Mereschkowsky
- *Goniaulax* Diesing
- *G.* cyst
- *G. scrippsae* Kofoid
- *Gymnodinium* Stein
- *G. lohmanni* Paulsen
- *Gyrodinium spirale* (Bergh) Kofoid et Swezy
- *Oxytoxum* Stein
- *Peridinium* Ehrenberg
- *P. cerasus* Paulsen
- *P. charcotii* Balech
- *P. minusculum* Pavillard
- *Prorocentrum* Ehrenberg
- *P. rampii* Sournia
- *Protoperidinium diabolum* (Cleve) Balech

Table 5. Species composition, abundance and vertical distribution of phytoplankton in western Baffin Bay at station 2D, August 20, 1979.

Sample depth (m)	1	5	20	50	100	200
Total phytoplankton (cells/litre)	3,976	3,318	4,578	740	930	970
Bacillariophyta	3,150	2,646	4,088	650	870	880
Centrales	1,792	1,414	1,680	460	410	560
Chaetoceros affinis	56	84	42	30	-	20
C. decipiens	56	42	42	100	60	160
C. furcellatus	1,134	672	1,022	230	330	370
Thalassiosira decipiens	546	616	574	100	20	10
Pennales	1,358	1,232	2,408	190	460	320
Cylindrotheca closterium	28	28	14	-	10	-
Gyrosigma fasciola	14	-	-	-	-	-
Navicula granii	-	28	350	60	310	50
Nitzschia cylindrus	1,106	784	1,750	110	90	260
N. delicatissima	-	28	56	-	-	-
N. grunowii	140	350	224	10	40	-
N. seriata	70	14	14	10	10	-
Pleurosigma sp.	-	-	-	-	-	10
Chlorophyta	364	322	224	80	40	90
Ankistrodesmus antarcticus	14	28	42	-	-	-
Chlamydomonas ballenyana	266	224	154	80	40	90
C. pulsatilla	84	56	28	-	-	-
Pyramimonas octociliata	-	14	-	-	-	-
Chrysophyta	-	56	42	-	-	-
Calyptrosphaera oblonga	-	14	-	-	-	-
Dinobryon cylindricum	-	14	-	-	-	-
Mallomonas sp.	-	28	-	-	-	-
Phaeocystis pouchetii	-	-	42	-	-	-
Euglenophyta	-	-	14	-	-	-
Euglena schmitzii	-	-	14	-	-	-

Table 5. (cont'd)

Sample depth (m)	1	5	20	50	100	200
Pyrrophyta	462	294	210	10	20	-
Dinophysis arctica	14	-	-	-	-	-
Goniaulax cyst	-	-	14	-	-	-
G. scrippsae	112	112	84	-	20	-
Gymnodinium sp.	56	-	42	-	-	-
G. lohmanni	-	-	14	-	-	-
Gyrodinium spirale	56	-	-	-	-	-
Peridinium sp.	-	14	42	-	-	-
P. cerasus	-	14	-	-	-	-
P. charcotii	154	84	14	-	-	-
P. minusculum	14	-	-	-	-	-
Protoperidinium diabolum	56	70	-	-	-	-

Table 6. Species composition, abundance and vertical distribution of phytoplankton in western Baffin Bay at station 2E, August 20, 1979.

Sample depth (m)	5	20	50	100	200
Total phytoplankton (cells/litre)	616	810	970	850	740
Bacillariophyta	252	650	780	710	640
Centrales	238	110	240	280	210
Chaetoceros affinis	42	20	-	-	-
C. decipiens	-	10	50	40	-
C. furcellatus	182	20	180	220	150
Thalassiosira decipiens	14	60	10	20	60
Pennales	14	540	540	430	430
Achnanthes taeniata	-	10	-	-	-
Cylindrotheca closterium	-	-	30	10	20
Fragilaria sp.	-	-	-	80	-
Navicula sp.	-	-	20	-	20
N. granii	-	260	360	50	280
Nitzschia cylindrus	-	240	70	290	90
N. delicatissima	-	-	30	-	-
N. grunowii	14	20	-	-	20
N. linearis	-	10	30	-	-
Chlorophyta	280	80	100	80	100
Chlamydomonas ballenyana	252	60	70	80	80
C. pulsatilla	28	20	30	-	20
Chrysophyta	-	10	-	20	-
Dinobryon sp.	-	10	-	-	-
Mallomonas sp.	-	-	-	20	-
Euglenophyta	14	-	-	-	-
Euglena schmitzii	14	-	-	-	-
Pyrrophyta	70	70	90	40	-
Goniaulax catenata	14	10	-	-	-
G. scrippsae	28	20	40	30	-
Gymnodinium cyst	-	-	10	-	-

Table 6. (Cont'd)

Sample depth (m)	5	20	50	100	200
G. sp.	-	10	-	-	-
G. lohmanni	-	10	-	-	-
Peridinium sp.	14	10	-	-	-
P. charcotii	14	10	10	-	-
P. minusculum	-	-	30	-	-
Prorocentrum sp.	-	-	-	10	-

Table 7. Species composition, abundance and vertical distribution of phytoplankton in western Baffin Bay at station 2F, August 22, 1979.

Sample depth (m)	1	5	20	50	100	200
Total phytoplankton (cells/litre)	830	1,750	3,080	1,064	448	322
Bacillariophyta	260	960	2,940	784	280	154
Centrales	220	760	714	616	266	140
Biddulphia sp.	10	-	-	-	-	-
Chaetoceros affinis	-	-	-	-	-	28
C. decipiens	-	-	-	-	14	-
C. furcellatus	80	240	238	546	196	112
Thalassiosira sp.	-	-	-	-	42	-
T. decipiens	130	520	746	70	14	-
Pennales	40	200	2,226	168	14	14
Achnanthes taeniata	-	10	-	-	-	14
Cylindrotheca closterium	-	20	28	-	-	-
Fragilaria pinnata	-	-	-	14	-	-
Gomphonema augur	-	10	-	-	-	-
Navicula granii	-	70	1,456	28	-	-
Nitzschia acicularis	-	10	14	14	-	-
N. cylindrus	-	20	224	70	14	-
N. delicatissima	30	-	-	-	-	-
N. grunowii	10	60	504	42	-	-
Chlorophyta	450	490	70	238	126	70
Ankistrodesmus falcatus	-	10	-	-	-	-
Carteria vectensis	-	10	-	-	-	-
Chlamydomonas ballenyana	290	300	56	154	-	70
C. pulsatilla	140	140	14	84	126	-
Pyramimonas octociliata	20	30	-	-	-	-
Chrysophyta	30	60	14	14	14	28
Calyptrosphaera oblonga	10	-	-	-	14	28
Mallomonas sp.	-	20	-	-	-	-
Phaeocystis pouchetii	20	40	14	-	-	-
Salpingoeca natans	-	-	-	14	-	-

Table 7. (Cont'd)

Sample depth (m)	1	5	20	50	100	200
Euglenophyta	-	20	-	-	-	-
Euglena schmitzii	-	20	-	-	-	-
Pyrrophyta	90	220	56	28	28	70
Goniaulax cyst	10	10	-	-	-	-
G. scrippsae	-	50	56	14	-	-
G. sp.	-	-	-	-	28	14
Gymnodinium sp.	10	40	-	-	-	-
G. lohmanni	10	30	-	-	-	-
Gyrodinium spirale	-	-	-	14	-	-
Oxytoxum sp.	10	-	-	-	-	28
Peridinium sp.	10	-	-	-	-	-
P. cerasus	20	-	-	-	-	-
P. charcotii	10	30	-	-	-	-
P. minusculum	10	60	-	-	-	-
Prorocentrum sp.	-	-	-	-	-	28

Table 8. Species composition, abundance and vertical distribution of phytoplankton in western Baffin Bay at station 3B, August 22, 1979.

Sample depth (m)	1	5	20	50	100	200
Total phytoplankton (cells/litre)	1,520	1,512	2,212	2,980	1,100	680
Bacillariophyta	880	1,036	1,582	2,650	960	530
Centrales	640	896	1,078	2,500	500	520
Biddulphia sp.	-	-	28	-	-	-
Chaetoceros affinis	100	56	28	10	10	-
C. borealis	-	14	-	-	-	-
C. decipiens	-	42	14	10	110	-
C. furcellatus	400	602	742	2,430	370	510
C. septentrionalis	-	14	-	-	-	-
Eucampia sp.	-	-	-	10	-	-
Thalassiosira sp.	20	-	14	-	-	-
T. decipiens	120	168	252	40	10	-
Pennales	240	140	504	150	460	10
Cylindrotheca closterium	20	56	-	-	-	-
Fragilaria pinnata	-	-	-	-	10	-
Gyrosigma fasciola	20	-	-	-	-	-
Navicula sp.	-	14	14	10	10	-
N. granii	20	-	28	80	50	-
Nitzschia cylindrus	-	-	322	50	370	-
N. grunowii	120	70	140	10	20	10
N. seriata	60	-	-	-	-	-
Chlorophyta	480	266	420	270	110	150
Ankistrodesmus antarcticus	20	14	14	-	-	-
A. falcatus	-	-	14	-	-	10
Carteria vectensis	-	-	14	-	-	-
Chlamydomonas ballenyana	280	196	238	210	70	120
C. pulsatilla	160	42	126	60	40	20
Pyramimonas octociliata	20	14	14	-	-	-
Chrysophyta	-	-	28	-	10	-
Phaeocystis pouchetii	-	-	28	-	-	-
Salpingoeca natans	-	-	-	-	10	-

Table 8. (cont'd)

Sample depth (m)	1	5	20	50	100	200
Euglenophyta	-	-	14	10	-	-
Euglena sp.	-	-	-	10	-	-
E. schmitzii	-	-	14	-	-	-
Pyrrophyta	160	210	420	50	20	-
Dinophysis sp.	-	-	14	-	-	-
D. arctica	20	14	14	-	-	-
Goniaulax cyst	-	-	-	30	-	-
G. scrippsae	-	70	70	10	10	-
G. sp.	20	-	-	-	-	-
Gymnodinium sp.	-	28	-	-	-	-
G. lohmanni	-	14	-	-	-	-
Gyrodinium spirale	-	14	28	-	-	-
Peridinium sp.	20	14	-	-	10	-
P. cerasus	-	-	28	10	-	-
P. charcotii	100	42	14	-	-	-
P. minusculum	-	14	-	-	-	-

Table 9. Species composition, abundance and vertical distribution of phytoplankton in western Baffin Bay at station 3D, August 21, 1979.

Sample depth (m)	1	5	20	50	100	200
Total phytoplankton (cells/litre)	510	280	1,204	5,138	168	740
Bacillariophyta	260	42	840	4,970	70	610
Centrales	250	28	630	1,092	56	170
Biddulphia sp.	-	-	14	-	-	-
Chaetoceros affinis	-	-	-	42	-	-
C. borealis	-	-	14	-	-	-
C. decipiens	-	-	-	28	-	30
C. furcellatus	140	28	462	588	56	110
C. lauderi	-	-	-	112	-	-
C. wighami	20	-	-	-	-	-
Eucampia sp.	10	-	-	-	-	-
Thalassiosira sp.	30	-	-	-	-	-
T. decipiens	50	-	140	322	-	30
Pennales	10	14	210	3,878	14	440
Achnanthes taeniata	-	-	14	-	-	10
Cylindrotheca closterium	-	-	-	28	-	-
Fragilaria sp.	-	-	-	-	-	30
Navicula sp.	-	14	-	-	-	-
N. crassirostris	10	-	-	-	-	-
N. granii	-	-	-	2,086	-	250
Nitzschia cylindrus	-	-	182	700	-	120
N. grunowii	-	-	14	700	14	30
N. linearis	-	-	-	168	-	-
N. seriata	-	-	-	196	-	-
Chlorophyta	40	84	168	126	42	100
Ankistrodesmus antarcticus	-	-	14	-	28	-
Carteria vectensis	-	-	-	14	-	-
Chlamydomonas ballenyana	10	56	112	84	14	100
C. pulsatilla	30	28	42	28	-	-
Chrysophyta	-	-	14	-	14	-
Mallomonas sp.	-	-	14	-	14	-

Table 9. (cont'd)

Sample depth (m)	1	5	20	50	100	200
Euglenophyta	-	-	-	14	14	-
Euglena schmitzii	-	-	-	14	14	-
Pyrrophyta	210	154	182	28	28	30
Dinophysis arctica	-	14	-	-	-	-
Glenodinium sp.	-	14	-	-	14	-
Goniaulax catenata	-	70	-	-	-	-
G. scrippsae	50	42	56	14	14	10
G. sp.	-	-	14	14	-	10
Gymnodinium sp.	20	-	-	-	-	-
G. lohmanni	10	-	14	-	-	-
Gyrodinium spirale	10	-	-	-	-	-
Oxytoxum sp.	20	-	14	-	-	-
Peridinium sp.	40	-	14	-	-	-
P. cerasus	-	-	42	-	-	-
P. charcotii	40	14	28	-	-	-
P. minusculum	10	-	-	-	-	-
Prorocentrum sp.	-	-	-	-	-	10
Protoperidinium diabolum	10	-	-	-	-	-

Table 10. Species composition, abundance and vertical distribution of phytoplankton in western Baffin Bay at station 3F, August 21, 1979.

Sample depth (m)	1	5	20	50	100	200
Total phytoplankton (cells/litre)	910	532	1,540	330	336	630
Bacillariophyta	460	140	900	200	266	336
Centrales	380	14	330	140	252	308
Chaetoceros affinis	20	-	60	-	-	-
C. borealis	-	14	-	10	-	-
C. furcellatus	280	-	230	120	224	154
C. septentrionalis	-	-	-	-	14	-
Thalassiosira decipiens	80	-	40	10	14	154
Pennales	80	126	570	60	14	28
Achnanthes taeniata	-	-	20	-	-	-
Cylindrotheca closterium	-	-	10	-	-	28
Navicula directa	-	14	-	-	-	-
N. granii	-	-	180	50	-	-
N. transitans var. derasa	-	-	10	-	-	-
Nitzschia acicularis	-	-	10	-	-	-
N. cylindrus	-	-	30	-	-	-
N. delicatissima	60	-	-	-	-	-
N. grunowii	-	-	290	-	14	-
N. linearis	-	-	20	-	-	-
N. seriata	-	112	-	-	-	-
Pinnularia quadratarea var. densestriata	10	-	-	-	-	-
Rhabdonema sp.	10	-	-	-	-	-
Synedra sp.	-	-	-	10	-	-
Chlorophyta	210	168	270	100	70	280
Ankistrodesmus sp.	-	14	50	-	-	-
A. antarcticus	-	-	-	10	-	-
Carteria vectensis	10	-	-	-	-	-
Chlamydomonas ballenyana	140	70	150	70	42	154
C. pulsatilla	60	84	60	20	28	126
Pyramimonas octociliata	-	-	10	-	-	-

Table 10. (Cont'd)

Sample depth (m)	1	5	20	50	100	200
Chrysophyta	20	14	-	-	-	-
Dinobryon sp.	10	-	-	-	-	-
D. cylindricum	10	-	-	-	-	-
Phaeocystis pouchetii	-	14	-	-	-	-
Euglenophyta	-	14	10	-	-	-
Euglena schmitzii	-	14	10	-	-	-
Pyrrophyta	220	196	360	30	-	14
Dinophysis arctica	20	-	10	-	-	-
Glenodinium sp.	10	-	-	-	-	-
Goniaulax sp.	-	14	20	-	-	-
G. catenata	-	70	20	-	-	-
G. scrippsae	140	56	100	10	-	-
Gymnodinium sp.	-	14	50	-	-	-
G. lohmanni	10	28	-	-	-	-
Gyrodinium spirale	10	-	40	10	-	-
Oxytoxum sp.	-	-	20	-	-	-
Peridinium sp.	10	14	30	-	-	-
P. cerasus	-	-	10	-	-	-
P. charcotii	-	-	60	10	-	-
Prorocentrum sp.	10	-	-	-	-	-
P. rampii	10	-	-	-	-	-

Table 11. Species composition, abundance and vertical distribution of phytoplankton in western Baffin Bay at station 13A, August 25, 1979.

Sample depth (m)	1	5	20	50	100	200
Total phytoplankton (cells/litre)	1,610	1,260	1,020	670	250	714
Bacillariophyta	1,030	644	750	420	170	518
Centrales	530	322	360	220	140	280
Biddulphia sp.	30	-	-	-	-	-
Chaetoceros borealis	-	14	-	-	-	-
C. decipiens	50	28	-	-	-	-
C. furcellatus	340	154	210	100	100	238
C. wighami	40	-	-	-	-	-
Thalassiosira sp.	-	-	-	-	10	-
T. decipiens	70	126	160	120	30	42
Pennales	500	322	390	200	30	238
Achnanthes taeniata	120	-	-	10	-	-
Cylindrotheca closterium	-	-	-	30	-	-
Gomphonema sp.	-	-	-	-	-	14
Navicula sp.	-	-	20	-	-	-
N. crassirostris	-	-	10	-	-	-
N. debilissima	-	14	-	-	-	-
N. granii	190	154	240	70	20	112
Nitzschia cylindrus	-	56	50	-	-	70
N. delicatissima	-	-	-	10	-	-
N. grunowii	10	56	20	30	10	28
N. linearis	100	-	-	50	-	14
N. seriata	10	-	20	-	-	-
N. sigma	60	42	30	-	-	-
Synedra sp.	10	-	-	-	-	-
Chlorophyta	290	266	180	160	80	168
Ankistrodesmus antarcticus	-	-	-	20	-	-
Carteria vectensis	30	28	-	-	-	14
Chlamydomonas ballenyana	160	182	80	50	70	140
C. pulsatilla	80	56	90	70	-	14
Pyramimonas octociliata	20	-	10	20	10	-

Table 11. (cont'd)

Sample depth (m)	1	5	20	50	100	200
Chrysophyta	70	14	-	-	-	-
Calyptrosphaera oblonga	30	-	-	-	-	-
Dinobryon sp.	40	-	-	-	-	-
Mallomonas sp.	-	14	-	-	-	-
Pyrrophyta	220	336	80	90	-	28
Dinophysis arctica	10	14	-	-	-	-
Goniaulax sp.	70	84	-	-	-	-
G. parva	20	-	-	-	-	-
G. scrippsae	30	70	60	60	-	28
Gymnodinium lohmanni	-	28	-	20	-	-
Gyrodinium spirale	-	14	-	10	-	-
Oxytoxum sp.	-	-	10	-	-	-
Peridinium charcotii	70	98	-	-	-	-
P. minusculum	20	28	-	-	-	-
Protoperidinium diabolum	-	-	10	-	-	-

Table 12. Species composition, abundance and vertical distribution of phytoplankton in western Baffin Bay at station 13C, August 25, 1979.

Sample depth (m)	1	5	20	50	100	200
Total phytoplankton (cells/litre)	3,220	850	1,980	90	168	1,008
Bacillariophyta	2,720	670	1,640	20	28	938
Centrales	650	300	440	10	14	392
Biddulphia sp.	30	-	-	-	-	-
Chaetoceros affinis	20	10	-	-	-	-
C. decipiens	-	10	20	-	-	-
C. furcellatus	210	20	50	-	14	350
C. septentrionalis	20	-	-	-	-	-
Thalassiosira sp.	50	110	90	-	-	28
T. decipiens	320	150	280	-	-	14
Triceratium sp.	-	-	-	10	-	-
Pennales	2,070	370	1,200	10	14	546
Achnanthes taeniata	70	-	-	-	-	-
Cocconeis scutellum	-	-	-	-	-	14
Cylindrotheca closterium	50	-	20	-	-	-
Fragilaria sp.	10	-	-	-	-	-
F. pinnata	10	-	-	-	-	14
Gomphonema sp.	-	-	10	-	-	-
G. augur	-	-	-	-	-	14
Navicula sp.	10	-	-	-	-	-
N. directa	-	-	-	-	-	14
N. transitans var. *derasa*	-	-	-	10	-	-
N. vanhoeffenii	20	-	-	-	-	-
Nitzschia acicularis	10	-	-	-	-	14
N. cylindrus	1,010	340	420	-	-	420
N. delicatissima	50	-	-	-	-	-
N. grunowii	710	30	720	-	14	-
N. linearis	-	-	-	-	-	56
N. seriata	10	-	-	-	-	-
N. sigma	90	-	30	-	-	-
Rhabdonema sp.	20	-	-	-	-	-

Table 12. (cont'd)

Sample depth (m)	1	5	20	50	100	200
Chlorophyta	160	60	150	40	126	70
Ankistrodesmus antarcticus	-	-	-	10	-	-
Chlamydomonas sp.	60	10	80	-	-	-
C. ballenyana	-	10	50	30	98	70
C. pulsatilla	90	40	10	-	28	-
Pyramimonas octociliata	10	-	10	-	-	-
Chrysophyta	30	10	30	-	-	-
Dinobryon sp.	-	10	30	-	-	-
Calyptrosphaera oblonga	30	-	-	-	-	-
Euglenophyta	10	-	20	-	-	-
Euglena sp.	10	-	-	-	-	-
E. proxima	-	-	20	-	-	-
Pyrrophyta	310	110	140	30	14	-
Dinophysis arctica	30	10	10	-	-	-
Goniaulax sp.	30	10	10	-	-	-
G. cyst	-	-	10	10	-	-
G. scrippsae	100	-	50	-	-	-
Gymnodinium sp.	30	30	-	-	-	-
Gyrodinium spirale	-	10	30	10	14	-
Oxytoxum sp.	20	-	10	10	-	-
Peridinium sp.	40	30	10	-	-	-
P. charcotii	20	10	10	-	-	-
Prorocentrum rampii	-	10	-	-	-	-
Protoperidinium diabolum	30	-	-	-	-	-

Table 13. Species composition, abundance and vertical distribution of phytoplankton in western Baffin Bay at station 13E, August 26, 1979.

Sample depth (m)	1	5	20	50	100	200
Total phytoplankton (cells/litre)	850	4,750	3,250	330	230	330
Bacillariophyta	540	3,900	2,710	100	120	230
Centrales	390	2,810	2,050	100	110	170
Biddulphia sp.	30	-	-	-	-	-
Chaetoceros affinis	10	-	20	-	-	-
C. borealis	10	-	-	-	-	-
C. decipiens	20	-	-	-	-	-
C. furcellatus	300	2,490	1,730	100	80	160
Thalassiosira decipiens	20	320	300	-	30	10
Pennales	150	1,090	660	-	10	60
Amphiprora sp.	-	-	-	-	-	10
Navicula sp.	-	-	20	-	-	-
N. debilissima	-	20	-	-	-	-
N. granii	-	-	-	-	-	10
N. cylindrus	140	610	400	-	10	40
N. grunowii	10	450	240	-	-	-
N. seriata	-	10	-	-	-	-
Chlorophyta	150	340	250	170	90	90
Ankistrodesmus antarcticus	-	20	-	-	10	-
Carteria vectensis	-	-	10	-	-	-
Chlamydomonas ballenyana	130	230	180	160	80	70
C. pulsatilla	20	90	60	10	-	20
Chrysophyta	10	10	10	-	-	-
Calyptrosphaera oblonga	10	-	-	-	-	-
Mallomonas sp.	-	10	10	-	-	-
Euglenophyta	10	80	30	-	-	-
Euglena proxima	-	80	30	-	-	-
E. schmitzii	10	-	-	-	-	-

Table 13. (cont'd)

Sample depth (m)	1	5	20	50	100	200
Pyrrophyta	140	420	250	60	20	10
Dinophysis arctica	-	10	10	-	-	-
Goniaulax sp.	-	-	-	10	-	-
G. catenata	-	10	-	-	-	-
G. cyst	-	-	10	-	-	-
G. scrippsae	50	70	80	10	10	-
Gymnodinium sp.	-	20	-	20	-	-
G. lohmanni	-	-	-	-	10	-
Gyrodinium spirale	30	130	30	20	-	-
Oxytoxum sp.	-	20	10	-	-	-
Peridinium cerasus	-	20	-	-	-	-
P. charcotii	-	60	70	-	-	-
P. minusculum	-	20	30	-	-	-
Prorocentrum sp.	60	60	10	-	-	10

Table 14. Species composition, abundance and vertical distribution of phytoplankton in western Baffin Bay at station 16A, August 27, 1979.

Sample depth (m)	1	5	20	50	100	200
Total phytoplankton (cells/litre)	1,080	1,700	3,990	780	1,080	920
Bacillariophyta	450	1,460	3,626	600	890	670
Centrales	380	660	1,120	250	630	600
Biddulphia striata	-	-	-	-	-	30
Chaetoceros affinis	-	-	56	-	-	-
C. decipiens	-	10	-	-	-	30
C. furcellatus	290	420	798	200	600	540
Eucampia sp.	10	-	-	-	-	-
Thalassiosira decipiens	80	230	266	50	30	-
Pennales	70	800	2,506	350	260	70
Navicula debilissima	-	-	42	-	-	-
N. granii	-	-	70	-	-	10
Nitzschia cylindrus	40	320	994	180	240	40
N. delicatissima	-	-	-	-	-	10
N. grunowii	20	440	1,344	120	20	-
N. linearis	10	30	14	50	-	10
N. seriata	-	10	28	-	-	-
N. sigma	-	-	14	-	-	-
Chlorophyta	130	130	210	130	130	190
Carteria vectensis	10	-	-	-	-	-
Chlamydomonas ballenyana	120	80	140	130	110	160
C. pulsatilla	-	40	56	-	20	30
Pyramimonas octociliata	-	10	14	-	-	-
Chrysophyta	10	30	14	20	-	10
Dinobryon sp.	-	10	-	-	-	-
Mallomonas sp.	10	-	14	20	-	-
M. caudata	-	-	-	-	-	10
Phaeocystis pouchetii	-	20	-	-	-	-
Euglenophyta	10	-	-	-	-	10
Euglena proxima	10	-	-	-	-	10

Table 14. (cont'd)

Sample depth (m)	1	5	20	50	100	200
Pyrrophyta	480	80	140	30	60	40
Dinophysis arctica	20	10	-	-	-	-
Goniaulax cyst	10	-	-	-	-	-
G. scrippsae	100	30	70	-	20	30
G. sp.	40	-	-	-	-	-
Gymnodinium lohmanni	20	-	-	-	-	-
Gyrodinium spirale	20	10	14	10	10	-
Peridinium sp.	20	20	28	-	10	-
P. cerasus	10	10	-	-	-	-
P. charcotii	210	-	-	-	10	-
P. minusculum	10	-	28	-	-	-
Prorocentrum sp.	10	-	-	-	10	10
Protoperidinium diabolum	10	-	-	20	-	-

Table 15. Species composition, abundance and vertical distribution of phytoplankton in western Baffin Bay at station 18D, October 5, 1979.

Sample depth (m)	1	5	20	50	100
Total phytoplankton (cells/litre)	3,290	2,548	3,320	910	120
Bacillariophyta	2,646	1,778	1,890	520	50
Centrales	826	448	790	290	20
Biddulphia striata	-	-	60	-	-
Chaetoceros affinis	54	-	20	-	-
C. borealis	14	28	20	-	-
C. decipiens	294	252	20	-	-
C. furcellatus	350	168	270	230	20
C. lauderi	-	-	10	-	-
C. septentrionalis	14	-	10	-	-
Eucampia sp.	-	-	20	-	-
Thalassiosira decipiens	98	-	360	60	-
Pennales	1,820	1,330	1,100	230	30
Achnanthes taeniata	14	-	-	-	-
Navicula granii	546	-	-	-	-
Nitzschia cylindrus	1,176	1,330	460	70	10
N. delicatissima	42	-	-	-	-
N. frigida	14	-	-	-	-
N. grunowii	28	-	20	150	20
N. linearis	-	-	620	-	-
N. sigma	-	-	-	10	-
Chlorophyta	392	350	640	260	30
Ankistrodesmus antarcticus	-	-	20	10	-
Carteria vectensis	-	28	-	-	-
Chlamydomonas ballenyana	336	280	600	210	30
C. pulsatilla	42	14	20	40	-
Pyramimonas octociliata	14	28	-	-	-
Chrysophyta	-	14	-	-	10
Dinobryon cylindricum	-	14	-	-	-
Phaeocystis pouchetii	-	-	-	-	10

Table 15. (cont'd)

Sample depth (m)	1	5	20	50	100
Euglenophyta	-	28	-	10	-
Euglena proxima	-	14	-	-	-
E. schmitzii	-	14	-	10	-
Pyrrophyta	252	378	480	120	30
Goniaulax scrippsae	112	168	260	30	10
Gymnodinium sp.	-	14	-	10	-
G. lohmanni	-	28	-	10	-
Gyrodinium spirale	-	42	-	10	20
Peridinium charcotii	28	-	-	-	-
P. minusculum	28	-	-	20	-
Prorocentrum sp.	84	98	180	30	-
Protoperidinium diabolum	-	28	40	10	-

Table 16. Species composition, abundance and vertical distribution of phytoplankton in western Baffin Bay at station 19B, October 5, 1979.

Sample depth (m)	1	5	20	50	100	200
Total phytoplankton (cells/litre)	530	550	240	310	370	460
Bacillariophyta	150	350	50	250	190	170
Centrales	140	110	40	70	180	170
Chaetoceros affinis	-	-	-	60	10	-
C. borealis	-	30	-	-	10	-
C. decipiens	-	10	-	-	10	10
C. furcellatus	110	40	40	-	150	160
Thalassiosira decipiens	30	30	-	10	-	-
Pennales	10	-	10	-	10	-
Cylindrotheca closterium	10	-	-	-	-	-
Nitzschia cylindrus	-	-	-	-	10	-
N. grunowii	-	-	10	-	-	-
Chlorophyta	220	240	110	180	140	230
Ankistrodesmus antarcticus	-	-	-	10	-	-
Chlamydomonas ballenyana	180	220	90	150	120	210
C. pulsatilla	40	20	20	20	20	20
Euglenophyta	-	-	-	10	-	-
Euglena schmitzii	-	-	-	10	-	-
Pyrrophyta	160	200	80	50	40	60
Goniaulax sp.	-	10	-	-	-	-
G. scrippsae	70	90	30	10	30	50
Gymnodinium sp.	10	-	-	-	-	-
G. lohmanni	10	10	-	-	-	-
Gyrodinium spirale	-	10	-	20	-	10
Peridinium sp.	10	-	20	-	-	-
P. minusculum	-	10	10	-	10	-
Prorocentrum sp.	60	70	20	20	-	-

Table 17. Species composition, abundance and vertical distribution of phytoplankton in western Baffin Bay at station 20C, October 9, 1979.

Sample depth (m)	1	5	20	50	100	200
Total phytoplankton (cells/litre)	830	810	660	660	630	880
Bacillariophyta	470	400	350	430	450	520
Centrales	450	390	330	400	430	470
Biddulphia striata	-	-	10	-	-	-
Chaetoceros affinis	-	-	-	-	-	40
C. borealis	10	50	-	-	-	-
C. decipiens	40	-	-	10	-	10
C. furcellatus	350	230	310	360	430	370
C. septentrionalis	-	20	-	-	-	20
Eucampia sp.	10	-	-	-	-	-
Thalassiosira decipiens	30	90	10	30	-	30
Triceratium sp.	10	-	-	-	-	-
Pennales	20	10	20	30	20	50
Cylindrotheca closterium	-	-	-	-	10	-
Navicula debilissima	-	-	-	10	-	-
N. granii	-	-	-	-	-	10
Nitzschia acicularis	-	-	-	-	-	10
N. cylindrus	-	-	20	-	-	20
N. grunowii	10	10	-	10	10	-
N. linearis	10	-	-	10	-	-
N. seriata	-	-	-	-	-	10
Chlorophyta	170	140	150	180	130	80
Ankistrodesmus antarcticus	-	-	-	10	-	10
Carteria vectensis	10	-	-	-	10	-
Chlamydomonas ballenyana	120	130	100	170	110	70
C. pulsatilla	40	10	50	-	10	-
Chrysophyta	-	10	-	-	10	-
Dinobryon sp.	-	10	-	-	-	-
Phaeocystis pouchetii	-	-	-	-	10	-
Euglenophyta	40	10	-	10	-	-
Euglena sp.	20	-	-	10	-	-

Table 17. (cont'd)

Sample depth (m)	1	5	20	50	100	200
E. proxima	20	10	-	-	-	-
Pyrrophyta	150	250	160	40	40	100
Goniaulax cyst	-	-	10	-	10	30
G. scrippsae	20	70	40	20	20	40
Gymnodinium sp.	10	40	10	-	-	-
Gyrodinium spirale	-	10	-	10	-	10
Oxytoxum sp.	-	-	10	-	-	-
Peridinium sp.	-	-	-	-	10	-
P. cerasus	-	-	-	10	-	-
P. minusculum	-	-	20	-	-	-
Prorocentrum sp.	120	130	70	-	-	20

Table 18. Species composition, abundance and vertical distribution of phytoplankton in western Baffin Bay at station 21C, October 10, 1979.

Sample depth (m)	1	5	20	100	200
Total phytoplankton (cells/litre)	1,050	1,010	1,730	518	538
Bacillariophyta	720	650	1,340	294	476
Centrales	480	440	630	280	388
Biddulphia striata	90	10	-	-	-
Chaetoceros borealis	80	40	10	-	-
C. decipiens	20	-	-	14	-
C. furcellatus	200	280	370	266	325
C. wighami	-	20	-	-	-
Thalassiosira decipiens	90	90	250	-	63
Pennales	240	210	710	14	88
Navicula sp.	-	-	-	-	13
Nitzschia cylindrus	140	120	120	14	-
N. grunowii	10	-	140	-	-
N. linearis	90	90	340	-	75
N. seriata	-	-	110	-	-
Chlorophyta	200	190	190	196	63
Ankistrodesmus antarcticus	10	-	-	-	-
Chlamydomonas ballenyana	130	180	160	182	63
C. pulsatilla	30	-	30	14	-
Pyramimonas octociliata	30	10	-	-	-
Euglenophyta	10	-	30	-	-
Euglena proxima	10	-	30	-	-
Pyrrophyta	120	170	170	28	-
Goniaulax sp.	10	20	20	-	-
G. scrippsae	80	50	50	-	-
Gymnodinium lohmanni	-	-	10	-	-
Gyrodinium spirale	-	10	-	-	-
Peridinium sp.	10	-	10	-	-
P. charcotii	-	-	-	14	-
Prorocentrum sp.	10	80	70	-	-

Table 18. (cont'd)

Sample depth (m)	1	5	20	100	200
P. rampii	-	10	10	-	-
Protoperidinium diabolum	10	-	-	14	-

Table 19. Species composition, abundance and vertical distribution of phytoplankton in western Baffin Bay at station 22C, October 11, 1979.

Sample depth (m)	1	5	20	50	100	200
Total phytoplankton (cells/litre)	890	950	860	1,610	360	400
Bacillariophyta	530	680	380	900	200	200
Centrales	250	430	240	630	200	200
Biddulphia sp.	-	-	-	10	-	-
B. aurita	20	-	-	-	-	-
Chaetoceros affinis	-	20	-	40	-	-
C. borealis	-	10	20	-	-	-
C. decipiens	40	-	-	40	-	-
C. furcellatus	100	370	190	320	190	200
Thalassiosira decipiens	90	30	30	220	10	-
Pennales	280	250	140	270	-	-
Diploneis sp.	-	10	-	-	-	-
Navicula granii	10	-	20	-	-	-
Nitzschia acicularis	-	-	-	20	-	-
N. cylindrus	170	-	-	110	-	-
N. grunowii	-	-	-	140	-	-
N. linearis	-	-	20	-	-	-
N. seriata	100	240	100	-	-	-
Chlorophyta	170	160	230	260	90	120
Ankistrodesmus antarcticus	-	-	-	-	-	10
Chlamydomonas ballenyana	140	140	190	180	80	100
C. pulsatilla	10	20	30	80	10	10
Pyramimonas octociliata	20	-	10	-	-	-
Chrysophyta	-	10	-	30	10	-
Dinobryon sp.	-	-	-	30	-	-
Mallomonas sp.	-	10	-	-	10	-
Euglenophyta	-	-	-	50	30	20
Euglena proxima	-	-	-	50	30	10
E. schmitzii	-	-	-	-	-	10

Table 19. (cont'd)

Sample depth (m)	1	5	20	50	100	200
Pyrrophyta	190	100	250	370	30	60
Dinophysis arctica	10	-	-	40	-	-
Goniaulax sp.	-	30	-	-	10	-
G. catenata	-	-	-	10	-	-
G. scrippsae	120	50	160	90	10	60
Gymnodinium sp.	-	-	10	10	-	-
G. lohmanni	-	-	10	60	-	-
Gyrodinium spirale	-	-	10	-	-	-
Oxytoxum sp.	-	-	10	10	-	-
Peridinium sp.	-	-	10	20	-	-
P. charcotii	-	-	-	40	10	-
P. minusculum	-	-	-	20	-	-
Prorocentrum sp.	50	20	40	70	-	-
P. rampii	10	-	-	-	-	-

Table 20. Species composition, abundance and vertical distribution of phytoplankton in western Baffin Bay at station 23D, October 12, 1979.

Sample depth (m)	1	5	20	50	100	200
Total phytoplankton (cells/litre)	840	1,862	890	970	1,180	2,270
Bacillariophyta	308	1,190	500	470	930	2,010
Centrales	182	658	420	280	440	810
Chaetoceros affinis	-	28	50	-	10	-
C. borealis	42	112	30	10	-	-
C. decipiens	-	42	10	-	20	10
C. furcellatus	84	308	270	230	410	660
C. septentrionalis	-	-	10	-	-	10
Thalassiosira decipiens	56	168	50	40	-	130
Pennales	126	532	80	190	490	1,200
Achnanthes taeniata	14	-	-	-	-	-
Cylindrotheca closterium	-	14	-	30	-	20
Gyrosigma fasciola	-	-	-	10	-	-
Navicula debilissima	-	-	-	10	-	10
N. granii	-	224	20	10	40	520
Nitzschia cylindrus	112	210	40	130	410	490
N. delicatissima	-	-	-	-	-	30
N. grunowii	-	70	20	-	30	50
N. linearis	-	-	-	-	-	70
N. seriata	-	-	-	-	10	10
Pleurosigma sp.	-	14	-	-	-	-
Chlorophyta	252	364	280	250	200	240
Ankistrodesmus antarcticus	-	-	-	70	10	-
Carteria vectensis	28	-	-	10	-	-
Chlamydomonas ballenyana	182	336	230	140	180	170
C. pulsatilla	42	28	50	30	10	70
Chrysophyta	-	-	-	-	10	10
Calyptrosphaera oblonga	-	-	-	-	10	-
Phaeocystis pouchetii	-	-	-	-	-	10

Table 20. (cont'd)

Sample depth (m)	1	5	20	50	100	200
Euglenophyta	14	70	10	-	-	-
Euglena acus	-	-	10	-	-	-
E. proxima	14	14	-	-	-	-
E. schmitzii	-	56	-	-	-	-
Pyrrophyta	266	238	100	250	40	10
Dinophysis arctica	-	-	-	20	-	-
Goniaulax sp.	-	-	-	20	-	-
G. scrippsae	126	126	100	170	40	10
Gymnodinium sp.	-	14	-	-	-	-
G. lohmanni	-	28	-	10	-	-
Gyrodinium spirale	-	14	-	10	-	-
Peridinium sp.	-	-	-	10	-	-
Prorocentrum sp.	140	56		10	-	-

Table 21. Species composition, abundance and vertical distribution of phytoplankton in eastern Jones Sound at station 1C, August 19, 1979.

Sample depth (m)	1	5	20	50	100	200
Total phytoplankton (cells/litre)	2,290	2,576	604,776	6,062	2,670	1,080
Bacillariophyta	1,860	1,946	592,120	5,796	2,590	890
Centrales	970	1,092	227,808	1,414	750	440
Chaetoceros sp.	-	-	1,808	-	-	-
C. affinis	-	-	-	-	-	20
C. decipiens	-	-	-	56	-	-
C. furcellatus	460	644	10,848	294	530	360
Ditylum sp.	-	-	-	-	10	-
Eucampia sp.	-	-	-	-	-	10
Thalassiosira sp.	10	14	-	-	110	10
T. decipiens	500	406	215,152	1,064	100	40
T. gravida	-	28	-	-	-	-
Pennales	890	854	364,312	4,382	1,840	450
Cylindrotheca closterium	50	-	4,520	-	-	10
Fragilaria sp.	10	-	-	-	-	-
F. pinnata	-	-	-	-	10	-
Gomphonema sp.	-	14	-	-	-	-
G. augur	-	14	-	-	-	-
Gyrosigma fasciola	-	14	2,712	14	-	-
Navicula sp.	-	-	-	-	20	-
N. debilissima	-	-	-	14	-	-
N. distans	-	-	1,808	-	-	-
N. granii	380	266	166,336	3,528	560	190
Nitzschia acicularis	-	126	904	-	10	-
N. cylindrus	-	70	59,664	532	170	90
N. delicatissima	-	182	16,272	42	60	-
N. grunowii	450	28	83,168	112	980	60
N. linearis	-	84	6,328	98	20	100
N. seriata	-	28	22,600	42	-	-
Pleurosigma longum	-	-	-	-	10	-
Chlorophyta	300	434	9,040	224	40	160
Ankistrodesmus sp.	-	14	-	-	-	-

Table 21. (cont'd)

Sample depth (m)	1	5	20	50	100	200
A. falcatus	-	-	-	-	-	10
Carteria vectensis	10	-	-	-	-	-
Chlamydomonas ballenyana	210	266	4,520	168	20	120
C. pulsatilla	70	154	2,712	42	20	30
Pyramimonas octociliata	10	-	1,808	14	-	-
Chrysophyta	20	14	904	14	-	-
Calyptrosphaera oblonga	10	-	-	14	-	-
Mallomonas sp.	10	14	-	-	-	-
Phaeocystis pouchetii	-	-	904	-	-	-
Euglenophyta	-	28	904	-	-	-
Euglena proxima	-	14	904	-	-	-
E. schmitzii	-	14	-	-	-	-
Pyrrophyta	110	154	1,808	28	40	30
Dinophysis artica	-	14	-	-	-	-
Goniaulax cyst	10	14	-	-	-	-
G. sp.	-	14	-	-	20	10
G. scrippsae	30	28	1,808	14	10	10
Gymnodinium sp.	10	-	-	-	-	-
G. lohmanni	20	28	-	-	10	-
Gyrodinium spirale	-	14	-	-	-	-
Oxytoxum sp.	-	14	-	-	-	-
Peridinium sp.	10	14	-	-	-	-
Prorocentrum sp.	-	-	-	-	-	10
Protoperidinium diabolum	30	14	-	14	-	-

Table 22. Species composition, abundance and vertical distribution of phytoplankton in eastern Jones Sound at station 1G, August 20, 1979.

Sample depth (m)	1	5	20	50	100	140
Total phytoplankton (cells/litre)	2,646	2,310	3,640	1,022	760	930
Bacillariophyta	1,946	1,834	2,870	784	660	740
Centrales	756	1,008	1,036	658	380	390
Chaetoceros affinis	-	56	-	-	-	30
C. borealis	-	14	28	-	-	-
C. decipiens	-	42	-	-	40	10
C. furcellatus	686	840	602	560	310	300
C. septentrionalis	14	42	28	-	-	-
C. wighami	14	-	-	-	-	-
Thalassiosira decipiens	42	14	378	98	30	50
Pennales	1,190	826	1,834	126	280	350
Achnanthes taeniata	-	14	-	28	-	-
Cylindrotheca closterium	-	-	-	-	-	10
Navicula sp.	-	-	14	-	-	-
N. granii	112	14	-	14	-	10
Nitzschia cylindrus	1,022	770	1,680	84	280	330
N. grunowii	42	28	112	-	-	-
N. seriata	14	-	28	-	-	-
Chlorophyta	462	336	448	168	100	130
Ankistrodesmus antarcticus	-	-	-	-	10	-
Carteria vectensis	14	-	-	-	-	-
Chlamydomonas ballenyana	392	266	364	126	80	90
C. pulsatilla	56	70	84	42	10	40
Chrysophyta	-	28	14	-	-	-
Calyptrosphaera oblonga	-	14	-	-	-	-
Dinobryon sp.	-	14	-	-	-	-
Phaeocystis pouchetii	-	-	14	-	-	-
Euglenophyta	14	-	14	-	-	20
Euglena proxima	14	-	-	-	-	-
E. schmitzii	-	-	14	-	-	20

Table 22. (cont'd)

Sample depth (m)	1	5	20	50	100	140
Pyrrophyta	224	112	294	70	-	40
Dinophysis artica	-	-	14	-	-	-
Goniaulax sp.	-	-	42	-	-	10
G. catenata	14	-	-	-	-	-
G. cyst	28	14	-	-	-	-
G. scrippsae	140	56	98	42	-	10
Gymnodinium sp.	-	14	28	-	-	-
Gyrodinium spirale	14	14	-	14	-	10
Peridinium sp.	-	-	28	-	-	10
P. charcotii	-	14	70	-	-	-
P. minusculum	28	-	14	14	-	-

Table 23. Species composition, abundance and vertical distribution of phytoplankton in eastern Jones Sound at station 2B, August 20, 1979.

Sample depth (m)	1	5	20	50	100	200
Total phytoplankton (cells/litre)	910	750	940	1,100	200	112
Bacillariophyta	490	510	650	740	40	14
Centrales	266	140	150	350	40	14
Chaetoceros furcellatus	182	50	100	180	40	14
C. septentrionalis	14	-	-	-	-	-
Thalassiosira decipiens	70	90	50	170	-	-
Pennales	224	370	500	390	-	-
Achnanthes taeniata	56	-	-	-	-	-
Cylindrotheca closterium	-	-	10	-	-	-
Navicula sp.	14	-	-	-	-	-
N. crassirostris	14	-	-	-	-	-
N. granii	126	170	-	-	-	-
Nitzschia cylindrus	-	180	310	180	-	-
N. grunowii	-	10	150	210	-	-
N. linearis	-	-	10	-	-	-
N. seriata	-	10	20	-	-	-
N. sigma	14	-	-	-	-	-
Chlorophyta	238	120	110	110	90	84
Chlamydomonas ballenyana	182	80	80	100	70	70
C. pulsatilla	56	40	30	10	10	14
Pyramimonas octociliata	-	-	-	-	10	-
Chrysophyta	-	20	20	-	-	-
Calyptrosphaera oblonga	-	-	10	-	-	-
Dinobryon sp.	-	-	10	-	-	-
Mallomonas sp.	-	10	-	-	-	-
Phaeocystis pouchetii	-	10	-	-	-	-
Euglenophyta	-	-	10	-	-	-
Euglena schmitzii	-	-	10	-	-	-

Table 23. (cont'd)

Sample depth (m)	1	5	20	50	100	200
Pyrrophyta	182	100	150	250	70	14
Dinophysis artica	-	-	-	50	-	-
Goniaulax catenata	-	-	20	-	-	-
G. scrippsae	70	40	10	20	40	14
Gymnodinium sp.	-	-	30	20	-	-
G. lohmanni	-	-	20	20	10	-
Gyrodinium spirale	-	-	10	20	-	-
Peridinium sp.	-	-	10	10	-	-
P. charcotii	84	30	50	90	10	-
P. minusculum	14	10	-	10	-	-
P. pellucidum	-	-	-	10	-	-
Prorocentrum sp.	14	20	-	-	-	-
Unidentified cyst	-	-	-	-	10	-

Table 24. Species composition, abundance and vertical distribution of phytoplankton in eastern Lancaster Sound at station 7B, August 24, 1979.

Sample depth (m)	1	5	20	50	100	200
Total phytoplankton (cells/litre)	1,200	410	2,720	570	1,640	1,310
Bacillariophyta	560	110	1,840	300	1,240	970
Centrales	270	90	720	140	1,240	760
Biddulphia striata	-	-	-	-	-	10
Chaetoceros affinis	-	-	-	-	-	30
C. decipiens	20	-	40	10	20	10
C. furcellatus	240	90	680	120	1,220	700
Thalassiosira decipiens	10	-	-	10	-	10
Pennales	290	20	-	160	-	210
Cylindrotheca closterium	-	-	-	-	-	10
Gyrosigma fasciola	10	-	-	-	-	-
Navicula sp.	-	-	-	10	-	-
Nitzschia cylindrus	280	-	-	80	-	100
N. grunowii	-	-	-	10	-	90
N. linearis	-	-	-	60	-	10
Chlorophyta	390	180	1,120	180	280	310
Carteria vectensis	20	20	120	-	-	-
Chlamydomonas ballenyana	280	140	640	160	280	240
C. pulsatilla	70	20	360	20	-	70
Pyramimonas octociliata	20	-	-	-	-	-
Chrysophyta	-	20	-	-	-	-
Mallomonas acaroides	-	20	-	-	-	-
Euglenophyta	30	-	40	-	20	20
Euglena proxima	-	-	40	-	-	10
E. schmitzii	30	-	-	-	20	10
Pyrrophyta	220	120	840	90	100	10
Goniaulax cyst	-	-	40	-	-	-

Table 24. (cont'd)

Sample depth (m)	1	5	20	50	100	200
G. scrippsae	130	100	360	60	40	-
Gymnodinium sp.	10	-	40	-	-	-
G. lohmanni	-	-	40	-	-	-
Gyrodinium spirale	-	-	120	10	20	10
Peridinium sp.	10	-	80	-	-	-
P. cerasus	-	-	-	-	20	-
P. charcotii	-	-	-	-	20	-
P. minusculum	50	20	80	10	-	-
Prorocentrum sp.	20	-	40	10	-	-
Protoperidinium diabolum	-	-	40	-	-	-

Table 25. Species composition, abundance and vertical distribution of phytoplankton in eastern Lancaster Sound at station 7D, August 23, 1979.

Sample depth (m)	1	5	20	50	100	200
Total phytoplankton (cells/litre)	1,190	1,030	1,250	740	390	430
Bacillariophyta	900	840	1,170	620	290	300
Centrales	640	440	540	270	260	300
Chaetoceros affinis	20	-	-	-	-	-
C. borealis	-	20	-	-	-	-
C. decipiens	30	10	-	20	-	20
C. furcellatus	520	300	270	250	260	250
C. septentrionalis	-	-	20	-	-	-
C. wighami	-	-	20	-	-	30
Eucampia sp.	10	-	-	-	-	-
Thalassiosira decipiens	60	110	230	-	-	-
Pennales	260	400	630	350	30	-
Cylindrotheca closterium	10	-	-	270	-	-
Eunotia sp.	10	-	-	-	-	-
Navicula granii	-	-	220	-	-	-
Nitzschia acicularis	20	-	10	-	-	-
N. cylindrus	150	280	140	-	20	-
N. delicatissima	30	50	60	-	-	-
N. grunowii	30	60	80	-	10	-
N. linearis	-	-	90	80	-	-
N. seriata	10	10	10	-	-	-
N. sigma	-	-	20	-	-	-
Chlorophyta	170	140	50	110	80	80
Ankistrodesmus antarcticus	-	-	-	-	-	10
Carteria vectensis	-	-	10	-	-	-
Chlamydomonas ballenyana	120	110	40	100	80	70
C. pulsatilla	50	30	-	10	-	-
Chrysophyta	40	-	20	-	-	-
Dinobryon sp.	30	-	10	-	-	-

Table 25. (cont'd)

Sample depth (m)	1	5	20	50	100	200
Mallomonas caudata	10	-	10	-	-	-
Euglenophyta	-	-	-	-	-	10
Euglena schmitzii	-	-	-	-	-	10
Pyrrophyta	80	50	10	10	20	40
Dinophysis sp.	-	-	-	-	-	10
Goniaulax sp.	10	-	-	-	-	-
G. scrippsae	40	10	-	-	10	30
Gymnodinium sp.	-	10	-	-	-	-
Gyrodinium spirale	-	10	-	-	-	-
Peridinium sp.	10	-	-	-	-	-
Protoperidinium diabolum	20	20	10	10	10	-

Table 26. Species composition, abundance and vertical distribution of phytoplankton in eastern Lancaster Sound at station 7E, August 23, 1979.

Sample depth (m)	1	5	20	50	100	200
Total phytoplankton (cells/litre)	6,350	4,746	4,630	940	1,480	4,648
Bacillariophyta	5,630	3,962	4,130	750	1,300	4,088
Centrales	2,850	2,100	1,600	340	620	1,428
Biddulphia sp.	-	-	10	-	-	14
Chaetoceros affinis	90	182	70	-	-	14
C. borealis	-	28	-	-	-	-
C. decipiens	60	98	30	40	110	-
C. furcellatus	1,890	812	320	210	510	364
C. septentrionalis	30	84	-	-	-	-
C. wighami	130	28	-	-	-	-
Eucampia groenlandica	-	-	-	-	-	28
Thalassiosira decipiens	650	868	1,170	90	-	1,008
Pennales	2,780	1,862	2,530	410	680	2,660
Achnanthes taeniata	80	-	-	-	40	14
Amphora inelegans	10	-	-	-	-	-
Cylindrotheca closterium	40	14	30	-	-	14
Navicula crassirostris	-	-	-	-	-	28
N. granii	230	882	1,070	80	60	1,190
N. transitans var. *derasa*	10	-	-	-	-	-
Nitzschia acicularis	40	28	-	10	10	-
N. cylindrus	2,060	476	1,050	280	570	882
N. delicatissima	80	56	60	20	-	56
N. grunowii	150	392	280	20	-	238
N. linearis	30	-	-	-	-	154
N. seriata	50	14	40	-	-	84
Chlorophyta	190	336	320	170	110	294
Ankistrodesmus antarcticus	-	-	-	-	-	14
Carteria vectensis	30	-	-	-	-	-
Chlamydomonas ballenyana	100	252	210	130	90	84
C. pulsatilla	60	84	80	40	20	168
Pyramimonas octociliata	-	-	30	-	-	28

Table 26. (cont'd)

Sample depth (m)	1	5	20	50	100	200
Chrysophyta	60	70	-	-	20	28
Dinobryon sp.	10	28	-	-	-	-
Mallomonas caudata	10	28	-	-	20	-
Phaeocystis pouchetii	40	14	-	-	-	28
Euglenophyta	10	-	80	10	20	238
Euglena proxima	-	-	50	-	-	-
E. schmitzii	10	-	30	10	20	-
Pyrrophyta	460	378	100	10	30	-
Dinophysis sp.	-	-	10	-	-	14
D. arctica	20	-	-	-	-	-
Goniaulax sp.	20	-	10	10	20	-
G. scrippsae	260	210	-	-	-	56
Gymnodinium sp.	30	42	-	-	-	42
G. lohmanni	20	-	20	-	-	-
Gyrodinium spirale	20	-	-	-	-	-
Peridinium sp.	10	42	30	-	-	70
P. cerasus	-	28	-	-	-	-
P. charcotii	70	14	-	-	-	-
P. minusculum	-	42	20	-	10	14
Prorocentrum sp.	-	-	10	-	-	42
Protoperidinium diabolum	10	-	-	-	-	-

Table 27. Species composition, abundance and vertical distribution of phytoplankton in eastern Lancaster Sound at station 4A, August 25, 1979.

Sample depth (m)	1	5	20	50	100	200
Total phytoplankton (cells/litre)	3,490	3,348	1,000	210	210	476
Bacillariophyta	3,040	2,520	780	28	140	294
Centrales	920	972	270	14	126	182
C. decipiens	-	54	-	-	-	-
C. furcellatus	380	522	-	14	126	154
Thalassiosira decipiens	540	396	-	-	-	28
Pennales	2,120	1,548	510	14	14	112
Achnanthes taeniata	10	18	-	14	-	-
Amphiprora concilians	-	36	-	-	-	-
Cylindrotheca closterium	10	72	-	-	-	-
Navicula granii	800	558	-	-	-	-
Nitzschia acicularis	20	18	-	-	-	14
N. cylindrus	1,130	90	-	-	-	70
N. delicatissima	-	90	-	-	-	-
N. grunowii	110	504	-	-	14	28
N. seriata	40	90	-	-	-	-
N. sigma	-	72	-	-	-	-
Pleurosigma sp.	-	-	-	-	-	-
Chlorophyta	220	432	80	84	42	126
Ankistrodesmus antarcticus	-	-	-	14	-	14
Carteria vectensis	10	18	-	-	-	-
Chlamydomonas ballenyana	140	288	-	56	28	84
C. pulsatilla	70	126	-	-	14	28
Pyramimonas octociliata	-	-	-	14	-	-
Chrysophyta	30	36	-	-	-	-
Dinobryon sp.	-	36	-	-	-	-
Distephanus sp.	10	-	-	-	-	-
Phaeocystis pouchetii	20	-	-	-	-	-

Table 27. (cont'd)

Sample depth (m)	1	5	20	50	100	200
Pyrrophyta	200	360	140	98	28	42
Goniaulax sp.	-	54	30	14	-	-
G. scrippsae	80	108	40	28	14	28
Gymnodinium sp.	30	-	10	-	-	14
G. lohmanni	-	-	10	-	14	-
Gyrodinium spirale	10	36	-	14	-	-
Oxytoxum sp.	-	18	-	-	-	-
Peridinium charcotii	80	72	-	42	-	-
P. minusculum	-	-	40	-	-	-
Prorocentrum rampii	-	18	10	-	-	-
Protoperidinium diabolum	-	54	-	-	-	-